Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of obtaining a compact representation of a fingerprint image, comprising:

providing a stored set of cellular region representations;

sub-dividing said image into a plurality of cellular regions;

for each cellular region:

comparing image information of said each cellular region to each cellular region representation of a plurality of said cellular region representations, where each cellular region representation of said set of cellular region representations is defined by a set of values for a parameter set, said parameter set comprising parameters of ridge angle and phase offset; and,

based on said comparison, selecting one cellular region representation of said set of cellular region representations to represent said each cellular region in order to form said compact representation of said fingerprint image.

2. (cancelled)

3. (cancelled)

4. (previously presented) The method of claim 1 wherein said each cellular region representation is defined as a cosinusoidal pattern.

5. (currently amended) A method of obtaining a representation of [[an]] a fingerprint image, comprising:

providing a stored set of cellular region representations;

sub-dividing said image into a plurality of cellular regions;

for each cellular region: comparing fingerprint image information of said each cellular region to each cellular region representation of a plurality of said cellular region representations; and,

based on said comparison, selecting one cellular region representation of said set of cellular region representations to represent said each cellular region;

wherein each cellular region representation of said set of cellular region representations comprises a set of values for a parameter set and wherein said fingerprint image information of said each cellular region comprises a set of values for said parameter set and wherein said parameter set comprises parameters of ridge angle, ridge spacing and phase offset.

6. (previously presented) The method of claim 1 wherein said each cellular region representation has a set of values for said parameter set different from that of all other cellular region representations of said set of cellular region representations.

7. (original) The method of claim 1 further comprising down-sampling said image to produce a down-sampled image prior to said sub-dividing.

8. (original) The method of claim 1 further comprising storing each selected one of said set of cellular region representations in order to store a representation of said image.

9. (original) The method of claim 1 wherein each of said cellular regions has identical spatial dimensions.

10. (original) The method of claim 1 further comprising associating a quality parameter with one or more of said cellular regions.

11. (cancelled)

12. (cancelled)

13. (previously presented) A computer readable medium containing computer executable instructions which, when loaded into a processor, cause said processor to create a compact representation of a fingerprint image:

provide a stored set of cellular region representations, where each cellular region representation of said set of cellular region representations is defined by a set of values for a parameter set, said parameter set comprising parameters of ridge angle and phase offset;

sub-divide a fingerprint image into a plurality of cellular regions; and, for each cellular region, compare image information of said each cellular region to each cellular region representation of a plurality of said cellular region representations; and,

based on said comparison, select one cellular region representation from said set of cellular region representations to represent said each cellular region in order to form said compact representation of said fingerprint image.

14. (previously presented) Apparatus for obtaining a compact representation of a fingerprint image, comprising:

a database storing a set of cellular region representations, where each cellular region representation of said set of cellular region representations is defined by a set of values for a parameter set, said parameter set comprising parameters of ridge angle and phase offset;

an image input; and

a processor operatively coupled to said image input and said database, said processor adapted to:

sub-divide said fingerprint image into a plurality of cellular regions; and

for each cellular region: compare image information of said each cellular region to each cellular region representation of a plurality of said cellular region representations; and, based on said comparison, select one cellular region representation from said set of cellular region representations to represent said each cellular region in order to form said compact representation of said fingerprint image.

15. (cancelled)

16. (previously presented) The method of claim 1 wherein said phase offset for said each cellular region is a measure of a distance between an origin of said each cellular region and a ridge line in said each cellular region closest to said origin.

17. (previously presented) The method of claim 16 wherein said parameter set further comprises a parameter of ridge spacing.

18. (previously presented) The computer readable medium of claim 13 wherein said phase offset for said each cellular region is a measure of a distance between an origin of said each cellular region and a ridge line in said each cellular region closest to said origin.

19. (previously presented) The computer readable medium of claim 18 wherein said parameter set further comprises a parameter of ridge spacing.

20. (previously presented) The apparatus of claim 14 wherein said phase offset for said each cellular region is a measure of a distance between an origin of said each cellular region and a ridge line in said each cellular region closest to said origin.

21. (previously presented) The apparatus of claim 20 wherein said parameter set further comprises a parameter of ridge spacing.